Regenerative Medicine
Biol 490 Senior Seminar, Section 10
Fall 2016

Instructor: Teresa Patitucci, PhD
Office: TNR 241
Phone: 715-847-0909
E-mail: tpatituc@uwsp.edu
Office Hours: Tuesdays 9am-12pm, 1-2pm
Additional Course Information: further information will be provided via the Desire2Learn site

Class Meetings: Tuesdays 2-3:40pm

Course Description:
This senior seminar course will cover topics related to regenerative medicine including stem cell technology and its growing application in translational research and personalized medicine, gene therapy, and organ transplantation. Due to the nature of this course as a communication in the major and capstone for senior students, the class will be largely student-driven with journal articles, student presentations, and a final paper.

Course Learning Objectives:
1. Apply prior scientific knowledge to understand regenerative medicine concepts.
2. Strengthen critical thinking skills through analysis of scientific literature.
3. Evaluate potential ethical concerns surrounding advances in regenerative medicine.
4. Develop written and oral communication skills for a variety of audiences.

Course Learning Outcomes:
As a result of this senior capstone course, students will be able to:
1. Apply discipline-specific standards of oral and written communication to compose an articulate, organized, and grammatically correct presentation/piece of writing with properly documented and supported ideas, evidence, and information suitable to the topic, purpose, and audience.
2. Critique their own and others' writing/oral presentations to provide effective and useful feedback to improve their communication.
3. Complete a project that integrates knowledge, skills, and experiences related to those General Education Program Outcomes appropriate to the discipline.
4. Demonstrate skills, processes, and resources needed to make a successful transition from college to the world beyond.

Readings (articles and books):
Journal articles are the core reading material for this course. These articles will be provided to students via the D2L website.

Grading Scale (out of 100% total):

A $\geq$ 93-100	C = 73-76
A- = 90-92	C- = 70-72
B+ = 87-89	D+ = 67-69
B = 83-86	D = 60-66
B- = 80-82	F < 60
C+ = 77-79	

Major Class Components: *The bulk of class time and effort will be broken down into three main areas:*

- Journal articles and discussion (5 class sessions, you will lead 1)
- Academic review paper (2000-2500 words)
- Presentation (25 min)

Journal Article Discussions:

There will be five journal article discussions throughout this course covering topics related to regenerative medicine. One of the discussions will be led by the instructor, while the other four will be led by the students. In groups of three, students will lead the class through a discussion on an assigned journal article. Attendance and participation is expected for all class sessions:

> *Journal response (possible 20 points, 5 points per write-up):* Regardless of whether or not you are leading the paper discussion, you should come to class prepared. This means, first and foremost, that you have read the paper. You will also submit a short write-up of the rationale for the study, the authors' hypothesis, and two questions for the discussion leaders.
>
> *Leading a discussion (possible 15 points):* Discussion leaders should have an in-depth understanding of the material in the paper, including the rationale for each experiment (what techniques were used, why these techniques were chosen, how does each figure in the paper relate to the hypothesis, etc.) and will submit a one-page analysis of the paper (stating whether the hypothesis was supported or refuted by the data, and if the conclusions of the paper were appropriate, given the data presented).

Academic Review Paper:

Each student will write a review paper to practice scientific writing. The paper topic is up to the student, but will need to be approved by the instructor by the second week of class. The paper must be 2000-2500 words in length (about 8-10 pages, double-spaced), excluding the references page. Students must use a minimum of five primary research articles and one academic review as references, properly cited throughout the paper and listed in a references section at the end of the paper. A rubric of how the final paper will be evaluated will be distributed separately.

> *Paper topic choice (possible 5 points):* The student should submit a paper topic idea to the instructor by September 13th, including a short paragraph (3-4 sentences) of how the topic relates to the topic of regenerative medicine and supported by at least three primary article abstracts.
>
> *Review paper outline (possible 10 points):* The student will need to submit an outline of their paper to the instructor by October 18th. The outline should have a clearly stated central topic that provides the basis for the rest of the review and a structure of the sub-topics that relate to the central idea.

Review paper first draft (possible 10 points): The student will be required to submit a first draft of their academic review paper by November 15th. The class will trade papers and peer review the work of a fellow classmate in class on 11/15. Due to this class activity, late first drafts will not be accepted.

Review paper peer review (possible 10 points): This is an in-class assignment in which students will review the first draft of a fellow colleague's review paper. The student should fill out a rubric and provide *thoughtful*, critical feedback.

Final academic review paper (possible 40 points): The final academic review paper will be due to the instructor by December 13th. The final paper should thoroughly cover major issues surrounding the main topic.

Presentation of Discussion Topic:

Students will prepare a 25-minute presentation on a topic voted on by the class during the first weeks of the course. A rubric detailing how the presentation will be evaluated by the instructor will be distributed separately. The presentation will be followed by a discussion among the whole class, led by the presenter. *Students are expected to participate in this discussion and respectfully debate pertinent ethical or logistical issues surrounding the topic.*

Presentation (possible 40 points): Each student will give one presentation during the semester on a topic chosen by the class, then lead a class discussion after the talk.

Presentation feed-back (possible 25 points, 5 points per discussion): Students who are not the main presenter will fill out a feedback sheet for the presenter describing strengths and weaknesses of the presentation.

Point Breakdown: *(see above for a brief description of each assignment)*

Discussion topic ideas	5 points
Journal discussion leadership	15 points
Journal response	20 points (5 points per article)
Review paper topic choice	5 points
Review paper outline	10 points
Review paper first draft	10 points
Review paper peer review	10 points
Final review paper	40 points
Presentation	40 points
Presentation discussion and feedback	25 points (5 points per discussion)
Participation and professionalism	20 points
TOTAL	**200 points**

Professionalism:

Attendance: Due to the discussion-based nature of this course, class attendance is required, and students are expected to arrive on time, having read any required readings. If you are not here, you cannot participate in the discussions. Tardiness or absences will cause you to lose participation and professionalism points (*5 points* deducted for each unexcused absence). Assignments are due when they are due. In other words, presentations must be done and papers must be turned in on the assigned dates. If you have an unexcused absence, you will NOT be allowed to make up missed work. Schedule yourself accordingly. Students should contact the

instructor in advance if there is an extenuating circumstance that will prevent them from attending class on a given day. Absences due to holy days, athletic competitions, etc. must be disclosed to the instructor at least 3 weeks in advance.

Participation: Students are expected to arrive on time, prepared, and ready to be engaged and actively participate in the classroom experience. Tardiness, disruptive behavior, or general lack of attention will result in loss of participation points.

Classroom Behavior: I expect nothing short of complete mutual respect and courtesy. It is very disruptive to your instructor and fellow students to arrive late, read extra-curricular media, or use cell phones and other electronic devices while class is in session. Surfing the web or on social media during class will count as an unexcused absence for that class period.

Academic Integrity:
Academic dishonesty in any form will result in disciplinary action in accordance with UW System Administrative Code. See http://www.uwsp.edu/centers/rights/RRBOOKLET8-2005-06.pdf for more information.

Assessment Requirements:
Satisfactory completion of this course requires the completion of the Biology Department's comprehensive exam. This exam not only provides valuable information to the instructor, the department and the university, but will provide you with the satisfaction of knowing how much you learned while attending UW-Stevens Point. Although your performance on this exam does not influence your grade in BIO 490, your grade will be withheld until the exam is complete. The exam will be offered at the following times:

Wednesday, December 7 at 6:00p.m. TNR 120

Thursday, December 8 at 6:00p.m. TNR 120

Please register for an exam time with your instructor. If you cannot attend either of these examination times contact Dr. Krista Slemmons (kslemmon@uwsp.edu) or Nancy Shefferly (Nancy.Shefferly@uwsp.edu) to schedule an alternative time.

Americans with Disabilities Act
In compliance with the Americans with Disabilities Act, I will make every effort to honor requests for reasonable accommodations made by individuals with disabilities. If you have a disability and require accommodations, please register with the Disability and Assistive Technology Center (6th floor Learning Resource Center in the Library) and let me know as soon as possible. Requests for accommodation can be responded to most effectively if I receive the requests early in the semester. Such requests are confidential.

Community Rights and Responsibilities
UWSP Community Bill of Rights and Responsibilities: UWSP values a safe, honest, respectful and inviting learning environment. A set of expectations for students and instructors, known as the Rights and Responsibilities document, is intended to help establish a positive living and learning environment. For

more information go to http://www.uwsp.edu/stuaffairs/Pages/rightsandresponsibilities.aspx.

The Rights and Responsibilities document also includes the policies regarding academic misconduct, which can be found at http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/ADA/rightsADAPolicyinfo.pdf.

Tentative Course Schedule:

Date	**Topic**	**Homework due**
Sept. 6	Course overview; introduction to regenerative medicine	
Sept. 13	Topic discussion and listing, introduction to scientific communicaiton and journal article review, sign up for paper discussion dates	Brainstorm topic ideas for discussions and paper, write a short paragraph explaining how the paper topic relates to this course. Support your idea with at least 3 abstracts
Sept. 20	Paper discussion (led by instructor)	Submit votes for topics; read paper and write out: rationale for the study, hypothesis, 2 questions for the presenter
Sept. 27	Student paper discussion 1	Come prepared to discuss paper
Oct. 4	Student paper discussion 2	Come prepared to discuss paper
Oct. 11	Student paper discussion 3	Come prepared to discuss paper
Oct. 18	Student paper discussion 4	Come prepared to discuss paper; paper outline due
Oct. 25	Discussion topic 1-2 presentations	
Nov. 1	Discussion topic 3-4 presentations	
Nov. 8	Discussion topic 5-6 presentations	
Nov. 15	In class peer evaluation of review papers	First draft of paper due
Nov. 22	Discussion topic 7-8 presentations	
Nov. 29	Discussion topic 9-10 presentations	
Dec. 6	Discussion topic 11-12 presentations	
Dec. 13	Course wrap-up and assessment	Final paper due